

California Wildlife Habitat Relationships System
California Department of Fish and Game
California Interagency Wildlife Task Group

GIANT GARTER SNAKE

Thamnophis gigas

Family: NATRICIDAE
R079

Order: SQUAMATA

Class: REPTILIA

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DISTRIBUTION, ABUNDANCE, AND SEASONALITY

The giant garter snake historically ranged in the Sacramento and San Joaquin valleys from Butte County in the north to Kern County in the south (Rossman et al. 1996). Its current range is much reduced, and it is apparently extirpated south of northern Fresno Co. (Bury 1971, Rossman et al. 1996). Rossman and Stewart (1987) recognized it as a full species. Primarily associated with marshes and sloughs, less with slow-moving creeks, and absent from larger rivers. Active from mid-March until October (Rossman et al. 1996).

SPECIFIC HABITAT REQUIREMENTS

Feeding: Generally quite aquatic, these garter snakes forage primarily in and along streams taking fish and amphibians and amphibian larvae (Fitch 1941). Most current food may be introduced species such as carp, mosquitofish, and bullfrogs, because the native prey such as blackfish, thick-tailed chub, and red-legged frog are no longer available (Rossman et al. 1996).

Cover: The preferred nocturnal retreats of this active diurnal snake are thought to be holes, especially mammal burrows, crevices, and surface objects. During the day the giant garter snake often basks on emergent vegetation such as cattails and tules. In hotter weather, mammal burrows and piles of vegetation may be used as daytime refuges. When disturbed it usually retreats rapidly to water (Fitch, 1940, Rossman et al. 1996).

Reproduction: Courtship and mating normally occur soon after spring emergence. Young are born alive between mid-July and early September, usually in secluded sites such as under the loose bark of rotting logs or in dense vegetation near pond or stream margins. Mean litter size is 23 (Rossman et al. 1996).

Water: No information on water requirements. This species is normally found in the immediate vicinity of permanent or semi-permanent sources of water.

Pattern: Extremely aquatic, rarely found away from water, and forages in the water for food (Rossman et al. 1996).

SPECIES LIFE HISTORY

Activity Patterns: An active diurnal snake. During the warm days of summer most activity occurs during the morning and afternoon. During the cooler weather of spring and fall, snakes restrict their activity to the warm afternoons.

Seasonal Movements/Migration: Migration is not expected.

Home Range: The nature of the home range of garter snakes in California is not well known. There is likely considerable overlap in the home ranges of neighboring individuals.

Territory: Not thought to be territorial. Although this species is not well studied, other garter snakes have not been observed exhibiting behaviors suggesting territoriality.

Reproduction: Courtship and mating occur in the spring soon after emergence. A mean litter of 30 young are born in July and August.

Niche: Giant garter snakes are taken as prey by mammals, birds, and other snakes despite the release of a repulsive musk from the postanal glands of disturbed individuals. Their competitive relationships with other snakes (especially other garter snakes) are not well understood.

Comments: The giant garter snake now is very scarce throughout its range in the Central Valley. Perhaps California's most aquatic garter snake, populations have been eliminated or decimated by the elimination of natural sloughs and marshy areas. Heavy use of pesticides is suspected as a contributing factor in the decline of this once-abundant garter snake of the Central Valley. Protection of waterfowl habitat may allow it to survive in a small portion of its original range.

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Life history accounts for species in the California Wildlife Habitat Relationships (CWHR) System were originally published in: Zeiner, D.C., W.F.Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1988-1990. California's Wildlife. Vol. I-III. California Department of Fish and Game, Sacramento, California. Updates are noted in accounts that have been added or edited since original publication.